AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

Listing of Claims:

1. (Previously Presented) A power management system for supplying power to an output circuit comprising: a plurality of rechargeable batteries; first conversion means for converting a supply voltage to a battery voltage to enable charging of one or more of the plurality of rechargeable batteries; and switch means to enable a selected battery of the plurality of rechargeable batteries to be connected to the output circuit to enable the selected battery to be discharged through the output circuit.

2. (Previously Presented) The system according to claim 1 wherein the switch means is connected to the first conversion means to enable charging to the selected battery.

3. (Previously Presented) The system according to claim 1 further comprising second conversion means connected between the output circuit and the switch means for converting the voltage of the selected battery to a voltage for use by the output circuit thereby discharging the selected battery.

4. (Previously Presented) The system according to claim 1 wherein a rechargeable battery of the plurality of rechargeable batteries is chosen, one at a time, in order to be charged or discharged.

5. (Previously Presented) The system according to claim 1 wherein the first conversion means acts as the second conversion means.

6. (Previously Presented) The system according to claim 1 wherein the switch means comprises a plurality of switches enabling connection of a respective rechargeable battery of the plurality of

rechargeable batteries to the first conversion means and to the output circuit.

7. (Previously Presented) The system according to claim 1 further comprising a control unit for controlling the switch means to either enable charging or discharging of a rechargeable battery of the plurality of rechargeable batteries.

8. (Previously Presented) The system according to claim 7 further comprising multiplexer means having an input connected to one terminal of each rechargeable battery in the plurality of rechargeable batteries to enable the voltage signals pertaining to each battery to be selected and forwarded to an analogue to digital converter.

9. (Previously Presented) The system according to claim 8 further comprising a shunt impedance means connected to the other terminal of each battery in the plurality of rechargeable batteries to measure the charge current of each battery, represented as a voltage drop across the shunt impedance means.

10. (Previously Presented) The system according to claim 9 wherein the shunt impedance means is connected in parallel to a shunt switch to short circuit the shunt impedance means when the shunt impedance is not in use.

11. (Previously Presented) The system according to claim 10 further comprising amplification means connected between the shunt impedance means and the multiplexer means to amplify the voltage drop across the shunt impedance means to the input voltage range of the analogue to digital converter.

12. (Previously Presented) The system according to claim 11 wherein the analogue to digital converter measures individual battery voltage of any one of the rechargeable batteries in the plurality of rechargeable batteries and converts the measured voltage to a digital value.

13. (Previously Presented) The system according to claim 11 wherein the analogue to digital converter measures the voltage drop across the shunt impedance means and converts the measured voltage into a digital value.

14. (Previously Presented) The system according to claim 13 further comprising a register for storing information pertaining to each battery.

15. (Previously Presented) The system according to claim 14 wherein said information comprises any one or more of charge status of each battery in the plurality of rechargeable batteries, error status of each battery in the plurality of rechargeable batteries or a flag identifying whether a battery in the plurality of rechargeable batteries has been disabled from being charged or discharged.

16. (Previously Presented) The system according to claim 15 wherein the control unit is in communication with the register and with the analogue to digital converter for processing signals and data from the analogue to digital converter and from the register.

17. (Previously Presented) The system according to claim 16 wherein the control unit periodically senses the presence of a voltage at the input to the switch means.

18. (Previously Presented) The system according to claim 17 wherein the control unit selects a battery of the plurality of rechargeable batteries to be charged or discharged on the basis of information stored in the register pertaining to a particular battery of the plurality of rechargeable batteries.

19. (Previously Presented) The system according to claim 1 wherein the second conversion means enables discharging of a battery of the plurality of rechargeable batteries such that charge in the selected battery of the plurality of rechargeable batteries is forwarded to the output circuit.

20. (Previously Presented) The system according to claim 19 wherein the output circuit forms part of an implantable device.

21. (Previously Presented) The system according to claim 20 wherein the implantable device is an implantable hearing prosthesis.

22. (Previously Presented) The system according to claim 1 wherein the first conversion means includes an inductive means, one or more switches and a switch control unit to enable charging and/or discharging of a selected battery of the plurality of rechargeable batteries.

23. (Previously Presented) The system according to claim 1 wherein the second conversion means includes an inductive means, one or more switches and a switch control unit to enable discharging of a selected battery of the plurality of rechargeable batteries.

24. (Previously Presented) The system according to claim 1 wherein the supply voltage is derived from an inductive means and rectified into a direct voltage to be applied to the inductive means of the first conversion means.

25. (Original) A method of managing the supply of power to an output circuit in a system that includes a plurality of rechargeable batteries, the method comprising the steps of: converting a supply voltage to a battery voltage to enable charging of one or more of the plurality of the rechargeable batteries; and connecting a battery in the plurality of rechargeable batteries, using switch means, to the output circuit to enable the connected battery to be discharged through the output circuit.

26. (Previously Presented) The method according to claim 25 wherein the connected battery in the plurality of rechargeable batteries is discharged to the output circuit by converting the voltage output from the connected battery in the plurality of rechargeable batteries to a voltage for use by the output circuit.

27. (Previously Presented) The method according to claim 25 further comprising the step of providing the switch means in the form of a bank of switches, one for each rechargeable battery of the plurality of rechargeable batteries.

28. (Previously Presented) The method according to claim 27 further comprising the step of controlling the switch means to enable the charging or discharging of a selected battery of the plurality of rechargeable batteries on the basis of information stored in a register on each of the rechargeable batteries in the plurality of rechargeable batteries.

29. (Previously Presented) The method according to claim 28 further comprising the steps of multiplexing and measuring parameters, such as battery voltage, battery charge and battery current, pertaining to each rechargeable battery in the plurality of rechargeable batteries for storage as digital values in the register.

30. (Previously Presented) The method according to claim 29 further comprising the step of maintaining a record in the register on the state of charge of each rechargeable battery in the plurality of rechargeable batteries.

31. (Previously Presented) The method according to claim 30 further comprising the step of providing an optimum range, as a percentage value of the state of charge, within which each rechargeable battery in the plurality of rechargeable batteries is charged and/or discharged.

32. (Previously Presented) The method according to claim 31 further comprising the step of disabling charging of a battery of the plurality of rechargeable batteries where the charge of that battery of the plurality of rechargeable batteries is above a first percentage limit of the state of charge.

33. (Previously Presented) The method according to claim 31 further comprising the step of terminating the discharging of a battery of the plurality of rechargeable batteries where the charge of that battery of the plurality of rechargeable batteries is below a second percentage limit of the state of charge.

34. (Previously Presented) A method of forming a patterned conductive element for an implantable medical device, the method comprising: (i) depositing a supplementary material on a sheet of conductive, parent material to form a sheet of composite material; (ii) applying a carrier material over the supplementary material of the composite sheet to form a sheet of semi-finished material; (iii) removing portions from at least the conductive parent material of the sheet of semi-finished material in accordance with a desired pattern corresponding to a patterned conductive element to be formed; and (iv) releasing at least the carrier material from the sheet of semi-finished material.

35. (Previously Presented) A method of making a sheet of semifinished material, the method comprising: depositing a supplementary material on a platinum sheet to form a composite sheet; and applying a carrier material over the supplementary material, to form a sheet of semi-finished material; wherein the platinum sheet on the semi-finished material has a thickness of not more than 100 .mu.m.

36. (Previously Presented) A method of forming an electrode array for an implantable medical device, the method comprising: (i) preparing a semi-finished sheet by depositing a supplementary material on a platinum sheet and then applying a carrier material over the supplementary material; (ii) removing portions from at least the platinum sheet in accordance with a predetermined pattern, the pattern including a linear array of stimulating or recording pads and at least one electrical conduction means extending away from each one of the pads to a location distal from the pad; and (iii) releasing the carrier material.